



**Matthews Transportation Advisory Committee  
Regular Meeting Agenda  
Thursday, June 16, 2022  
Virtual**

Join Zoom Meeting

<https://us06web.zoom.us/j/89948210708?pwd=cjdRMTRXWWNBsgIJTFFMSjYwV2M0Zz09>

Meeting ID: 899 4821 0708

Passcode: 336063

One tap mobile

+13126266799,,89948210708#,,,,\*336063# US (Chicago)

+16465588656,,89948210708#,,,,\*336063# US (New York)

1. Call to order – Hough
2. Roll Call and Determination of Quorum – Hough
3. Approval of the Minutes from March 17, 2022 meeting (attached) – Hough
4. Public Comments - Hough
5. Announcements
  - a. Staff Announcements – Habina-Woolard
  - b. CTAG Updates - CTAG Liaison – Rhodes
6. Unfinished Business
  - a. N Ames St. Sidewalk Project - Easement purchase – [memo](#) - Habina-Woolard
  - b. EV charging station review update - Hough + Habina-Woolard
    - o [EV Standards Example](#) provided by Planning Dept. (beginning page 21 for sample standards)
7. New Business
  - a. Walnut Point Dr. Traffic Calming Request - [TCP](#) - Habina-Woolard - attachments
  - b. Review when TAC reviews rezonings in the rezoning process - Byers
  - c. [Rezonings](#) - Habina-Woolard
    - o No new rezoning petitions to review
  - d. [Board of Commissioners Upcoming Meetings](#) - Habina-Woolard
    - o No TAC items
8. Adjournment



**Matthews Transportation Advisory Committee**

**DRAFT Meeting Minutes**

**Thursday, May 19, 2022**

**Matthews Community Center, Room 104**

1. Call to order
2. Roll Call and Determination of Quorum
  - a. TAC Members: Chris Hough (chair), Robyn Byers, Lou Abernathy, George Sottilo, Bryan Hall, Bill Stevens, Donny Rhodes
  - b. Town Staff: CJ O'Neill, PE - Public Works Director
  - c. Guests: none
3. Approval of the Minutes from March 17, 2022 meeting
  - a. Mr. Sottilo motioned to approve the minutes; Mr. Hall seconded - Unanimous approval
4. Public Comments - no public comment
5. Announcements
  - a. Staff Announcements - no staff comments
  - b. CTAG Updates - CTAG Liaison
    - o MTC reviewed the CATS proposed budget.
    - o CATS will start testing QR codes on bus routes in the near future. Ridership is up and there are potential new stops that will be open for public input next month.
    - o 12 electric buses that are currently being tested.
    - o There was discussion surrounding the tracking app available for CATS and its accuracy - roughly 75% of the time.
    - o CATS discussed the new Charlotte Transportation Center redevelopment plan, which includes below-grade bus depot with retail above. There was a comment about usability with bicyclists going below-grade to gain access to buses.
6. Unfinished Business
  - a. Meeting format - return to in-person meetings
    - o TAC discussed the benefits and drawbacks of meeting virtually, in-person only, or in a hybrid format. The Town cannot currently support a hybrid option for TAC due to the lack of resources.
    - o Mr. Sottilo motioned to return TAC meetings to 100% virtual, seconded by Mr. Abernathy. The vote carries with a 4-2 vote in the affirmative starting in June 2022.
  - a. 2022-753 - Leon Levine Foundation/Marglyn at Matthews - [TIA](#)
    - o Public Hearing May 9, 2022
    - o [Current Public Input](#)

- There was a motion made at last month's TAC to address safety concern (see March 17 minutes). Specific safety concerns were discussed including site distance, the degree of the curvature of the road, public input about safety, and NCDOT not being in favor of a pedestrian crossing. The TIA has not been resubmitted and the petition will be deferred to next month.

## 7. New Business

### a. Four Mile Creek Greenway tunnel project

- Town staff and TAC members discussed where the tunnel will be and where it will connect. The tunnel will come under Trade street and wrap up to connect to the sidewalk along Trade Street, but will eventually connect to a portion of greenway along Four Mile Creek once constructed.

### b. [Rezoning](#)s - O'Neill

- 2022-758 - Matthews Village West - [Site Plan](#) - TIA not received
  1. This petition is multi-use and includes some open space. The TIA has not been received.
  2. Mr. Hough motioned to recommend Town Commissioners defer the Public Hearing of 2022-758 and related 2022-749 until after the TAC has had a chance to review the TIA, seconded by Mr. Stevens. The motion was approved unanimously.
- 2022-749 - Matthews Village East - [Site Plan](#) - TIA not received
  1. As this petition is related to the one above, it was captured in the same discussion.
- 2022-757 - Towns at Hayden - [Site Plan](#) - [TIA](#)
  1. This petition is for information only as there are no comments from the TIA reviewer back to staff; staff will meet with the consultant later in May. Mr. Abernathy did mention that it would be nice for the new main road to tie into Clare Dr. at a 90-degree angle.
- 2022-752 - Matthews Gateway Site - [Site Plan](#) - [TIA](#) (rescinded)
  1. The TIA was rescinded by the applicant and has not been resubmitted for review. Mr. Abernathy discussed different options to take the greenway along the creek and connect to Greylock Ridge Rd., or follow the sewer easement.
  2. Mr. Hough motioned to recommend Town Commissioners defer the Public Hearing of 2022-757 until after the TAC has had a chance to review and comment on the resubmitted TIA, seconded by Mr. Stevens. The motion was approved unanimously.
- Mr. Abernathy brought up having electric vehicle (EV) charging stations as a requirement for all new multi-family construction. The TAC discussed merits and precedent from other communities, including the addition in Charlotte's draft Unified Development Ordinance.
  1. Mr. Abernathy motioned to have staff research requiring all multi-family developments to have a plan for providing EV charging stations and bring recommendations back to TAC, seconded by Dr. Byers. The motion passed with a vote of 5-1 with Mr. Sotillo voting nay.

c. [Board of Commissioners Upcoming Meetings](#)

- [N Ames St. Sidewalk Project - Right of Way purchase](#) (memo attached)
- Mr. O'Neill mentioned that staff will be revising the memo and will bring it back to TAC next month to fully review.

d. Review and comment on TAC article for upcoming Town newsletter - O'Neill

- Mr. O'Neill explained that the Town is putting together a packet of information on the various committees to boost membership. TAC reviewed the article and approved photographic choices to accompany the article.

e. [CRTPO 2024-2033 DRAFT STIP](#)

- Mr. O'Neill presented information related to the draft STIP and projects relevant to the Town. There are currently three funded projects for the Town:
  1. Parts of U-2509
  2. McKee A
  3. E John St. from I-485 to Union County
- Both NC 51 projects and E John St. from Trade St. to I-485 are listed as partially funded.
- Unfunded projects include the U-6166 Eastern Circumferential project from Northeast Parkway/Arequipa to Sam Newell.

8. Adjournment

## MetroCount Traffic Executive Speed Bins with Grand Total

### CustomList-98 -- English (ENU)

#### Datasets:

**Site:** [500 Walnut Point Dr] <25mph>  
**Attribute:** Mecklenburg  
**Direction:** 5 - South bound A>B, North bound B>A. **Lane:** 1  
**Survey Duration:** 11:04 Wednesday, March 23, 2022 => 12:34 Friday, April 1, 2022,  
**Zone:**  
**File:** 500 Walnut Point Dr 0 2022-04-01 1235.EC1 (Plus )  
**Identifier:** FA30DDZT MC56-L5 [MC55] (c)Microcom 19Oct04  
**Algorithm:** Factory default axle (v5.07)  
**Data type:** Axle sensors - Paired (Class/Speed/Count)

#### Profile:

**Filter time:** 11:05 Wednesday, March 23, 2022 => 12:34 Friday, April 1, 2022 (9.06247)  
**Included classes:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13  
**Speed range:** 6 - 99 mph.  
**Direction:** North, East, South, West (bound), P = North, Lane = 0-16  
**Separation:** Headway > 0 sec, Span 0 - 328.084 ft  
**Name:** Default Profile  
**Scheme:** Vehicle classification (Scheme F3)  
**Units:** Non metric (ft, mi, ft/s, mph, lb, ton)

#### Column Legend:

**0 [Time]** 24-hour time (0000 - 2359)  
**1 [Total]** Number in time step  
**2 [Vbin]** Speed bin totals  
**3 [Mean]** Average speed  
**4 [Vpp]** Percentile speed

**Total days = 8, Coverage = 2.19%**

ADT = 882.750, SD = 91.464

AADT = 882.750, SD = 91.464

**Weekdays = 6, Coverage = 1.64%**

AWDT = 920.833, SD = 55.083

AAWDT = 920.833, SD = 55.083

**Weekend days = 2, Coverage = 0.55%**

AWET = 768.500, SD = 92.631

AAWET = 768.500, SD = 92.631

**\* Wednesday, March 23, 2022**

Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
<--		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		85
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
1200	9	0	0	1	4	1	3	0	0	0	0	0	0	0	0	0	0	20.5	-
1300	40	0	0	2	1	8	22	5	2	0	0	0	0	0	0	0	0	26.5	30.5
1400	72	0	0	4	4	16	34	13	1	0	0	0	0	0	0	0	0	25.7	31.2
1500	72	0	1	3	3	20	29	13	3	0	0	0	0	0	0	0	0	25.8	31.1
1600	49	0	0	2	1	13	27	6	0	0	0	0	0	0	0	0	0	25.9	29.6
1700	76	0	0	2	3	32	24	11	4	0	0	0	0	0	0	0	0	25.9	30.9
1800	51	0	0	2	3	11	30	5	0	0	0	0	0	0	0	0	0	25.7	29.3
1900	37	0	0	1	4	11	14	7	0	0	0	0	0	0	0	0	0	25.8	31.0
2000	26	0	0	0	2	10	10	4	0	0	0	0	0	0	0	0	0	25.7	30.3
2100	18	0	0	0	1	6	9	2	0	0	0	0	0	0	0	0	0	26.5	29.8
2200	8	0	0	0	0	2	4	2	0	0	0	0	0	0	0	0	0	27.5	-
2300	3	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	25.0	-
07-19	369	0	1	16	19	101	169	53	10	0	0	0	0	0	0	0	0	25.7	30.6
06-22	450	0	1	17	26	128	202	66	10	0	0	0	0	0	0	0	0	25.8	30.5
06-00	461	0	1	17	26	132	207	68	10	0	0	0	0	0	0	0	0	25.8	30.5
00-00	461	0	1	17	26	132	207	68	10	0	0	0	0	0	0	0	0	25.8	30.5

Vehicles = 461

Posted speed limit = 25 mph, Exceeding = 285 (61.82%), Mean Exceeding = 28.82 mph

Maximum = 38.1 mph, Minimum = 7.9 mph, Mean = 25.8 mph

85% Speed = 30.53 mph, 50% Speed = 26.51 mph, Median = 26.51 mph

10 mph Pace = 22 - 32, Number in Pace = 346 (75.05%)

Variance = 24.08, Standard Deviation = 4.91 mph

**\* Thursday, March 24, 2022**

Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
<--		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		85
0000	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	24.2	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	20.4	-
0300	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	21.9	-
0400	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	37.1	-
0500	12	0	0	0	0	4	5	3	0	0	0	0	0	0	0	0	0	27.3	30.7
0600	41	0	0	0	0	8	22	11	0	0	0	0	0	0	0	0	0	28.0	30.9
0700	96	0	0	0	10	31	45	10	0	0	0	0	0	0	0	0	0	25.4	29.3
0800	52	0	0	1	6	13	25	7	0	0	0	0	0	0	0	0	0	25.3	29.9
0900	54	0	0	0	8	19	21	6	0	0	0	0	0	0	0	0	0	24.8	29.7
1000	40	0	0	1	2	9	21	6	1	0	0	0	0	0	0	0	0	26.4	30.3
1100	63	0	1	3	4	22	27	6	0	0	0	0	0	0	0	0	0	24.8	29.1
1200	50	0	0	1	5	22	17	5	0	0	0	0	0	0	0	0	0	24.5	29.6
1300	54	0	0	1	3	18	23	8	1	0	0	0	0	0	0	0	0	25.9	30.4
1400	73	0	0	1	8	18	34	9	3	0	0	0	0	0	0	0	0	25.6	30.2
1500	52	0	1	1	5	23	20	2	0	0	0	0	0	0	0	0	0	24.1	27.8
1600	59	0	1	1	2	16	27	12	0	0	0	0	0	0	0	0	0	26.3	30.6
1700	72	0	0	1	8	22	29	11	1	0	0	0	0	0	0	0	0	25.7	30.7
1800	67	0	0	2	2	20	33	10	0	0	0	0	0	0	0	0	0	25.9	30.0
1900	51	0	0	0	4	11	24	12	0	0	0	0	0	0	0	0	0	26.3	31.6
2000	44	0	0	0	4	10	21	9	0	0	0	0	0	0	0	0	0	26.5	30.8
2100	19	0	0	0	1	3	12	2	1	0	0	0	0	0	0	0	0	27.1	31.1
2200	9	0	0	0	0	1	7	1	0	0	0	0	0	0	0	0	0	27.2	-
2300	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	23.2	-
07-19	732	0	3	13	63	233	322	92	6	0	0	0	0	0	0	0	0	25.4	29.8
06-22	887	0	3	13	72	265	401	126	7	0	0	0	0	0	0	0	0	25.7	30.0
06-00	898	0	3	13	73	266	409	127	7	0	0	0	0	0	0	0	0	25.7	30.0
00-00	916	0	3	13	75	272	415	130	8	0	0	0	0	0	0	0	0	25.7	30.0

Vehicles = 916

Posted speed limit = 25 mph, Exceeding = 553 (60.37%), Mean Exceeding = 28.49 mph

Maximum = 39.8 mph, Minimum = 8.3 mph, Mean = 25.7 mph

85% Speed = 29.97 mph, 50% Speed = 26.06 mph, Median = 26.06 mph

10 mph Pace = 21 - 31, Number in Pace = 704 (76.86%)

Variance = 19.29, Standard Deviation = 4.39 mph

**\* Friday, March 25, 2022**

Friday, March 20, 2022																			
Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
<--		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		85
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		

0000	3	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	30.2	-
0100	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	21.8	-
0200	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	29.2	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0500	10	0	0	0	0	4	6	0	0	0	0	0	0	0	0	0	0	25.6	-
0600	44	0	0	0	0	11	25	8	0	0	0	0	0	0	0	0	0	27.2	30.6
0700	89	0	0	1	10	32	35	10	1	0	0	0	0	0	0	0	0	24.8	29.6
0800	60	0	1	0	4	16	29	10	0	0	0	0	0	0	0	0	0	25.7	30.5
0900	43	0	0	2	3	13	13	11	0	1	0	0	0	0	0	0	0	26.1	31.8
1000	58	0	0	0	3	15	24	14	1	1	0	0	0	0	0	0	0	27.3	31.5
1100	49	0	1	2	4	4	21	15	2	0	0	0	0	0	0	0	0	27.0	33.4
1200	69	0	1	1	7	19	26	13	2	0	0	0	0	0	0	0	0	25.9	31.1
1300	61	0	0	0	8	12	26	11	3	1	0	0	0	0	0	0	0	27.1	33.1
1400	90	0	0	2	6	22	45	13	2	0	0	0	0	0	0	0	0	26.0	30.9
1500	87	0	1	2	9	26	38	10	1	0	0	0	0	0	0	0	0	25.2	29.7
1600	68	0	0	1	5	12	34	14	2	0	0	0	0	0	0	0	0	27.0	31.1
1700	73	0	0	1	3	22	34	10	3	0	0	0	0	0	0	0	0	26.3	30.4
1800	76	0	0	0	9	26	26	15	0	0	0	0	0	0	0	0	0	25.8	30.9
1900	55	0	0	0	3	23	20	9	0	0	0	0	0	0	0	0	0	25.6	30.5
2000	42	0	0	0	2	17	20	3	0	0	0	0	0	0	0	0	0	25.5	29.1
2100	24	0	0	0	3	9	12	0	0	0	0	0	0	0	0	0	0	24.5	27.8
2200	11	0	0	0	0	6	4	0	1	0	0	0	0	0	0	0	0	25.7	30.3
2300	9	0	0	0	2	1	4	2	0	0	0	0	0	0	0	0	0	26.0	-
07-19	823	0	4	12	71	219	351	146	17	3	0	0	0	0	0	0	0	26.1	30.9
06-22	988	0	4	12	79	279	428	166	17	3	0	0	0	0	0	0	0	26.0	30.6
06-00	1008	0	4	12	81	286	436	168	18	3	0	0	0	0	0	0	0	26.0	30.6
00-00	1023	0	4	12	81	291	444	169	19	3	0	0	0	0	0	0	0	26.0	30.6

Vehicles = 1023

Posted speed limit = 25 mph, Exceeding = 635 (62.07%), Mean Exceeding = 28.86 mph

Maximum = 42.1 mph, Minimum = 7.2 mph, Mean = 26.0 mph

85% Speed = 30.65 mph, 50% Speed = 26.17 mph, Median = 26.17 mph

10 mph Pace = 21 - 31, Number in Pace = 765 (74.78%)

Variance = 22.12, Standard Deviation = 4.70 mph

#### \* Saturday, March 26, 2022

Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
<--		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		85
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		
0000	8	0	0	0	0	2	5	1	0	0	0	0	0	0	0	0	0	26.6	-
0100	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	38.0	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	27.8	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0500	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	23.9	-
0600	7	0	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	24.3	-
0700	16	0	0	0	1	4	9	1	1	0	0	0	0	0	0	0	0	26.9	31.7
0800	45	0	0	1	3	17	21	2	1	0	0	0	0	0	0	0	0	25.1	29.2
0900	51	0	0	0	2	8	29	11	1	0	0	0	0	0	0	0	0	27.5	31.2
1000	57	0	0	1	2	14	27	13	0	0	0	0	0	0	0	0	0	26.8	31.4
1100	63	0	0	1	0	11	32	17	2	0	0	0	0	0	0	0	0	27.7	31.2
1200	78	0	0	1	3	16	33	22	3	0	0	0	0	0	0	0	0	27.9	32.9
1300	69	0	0	2	2	18	31	15	1	0	0	0	0	0	0	0	0	26.7	31.3
1400	68	0	0	3	2	12	32	16	3	0	0	0	0	0	0	0	0	27.0	31.7
1500	73	0	0	3	3	13	38	15	1	0	0	0	0	0	0	0	0	26.8	31.1
1600	72	0	0	0	4	16	33	18	1	0	0	0	0	0	0	0	0	27.1	31.8
1700	62	0	0	0	2	12	39	8	1	0	0	0	0	0	0	0	0	26.7	29.9
1800	50	0	0	1	1	14	24	9	1	0	0	0	0	0	0	0	0	26.9	31.8
1900	44	0	1	3	5	18	9	8	0	0	0	0	0	0	0	0	0	23.7	30.9
2000	27	0	0	0	2	12	12	1	0	0	0	0	0	0	0	0	0	25.3	28.8
2100	22	0	0	0	2	7	12	1	0	0	0	0	0	0	0	0	0	25.7	29.7
2200	10	0	0	0	0	5	4	1	0	0	0	0	0	0	0	0	0	26.0	-
2300	7	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	30.2	-
07-19	704	0	0	13	25	155	348	147	16	0	0	0	0	0	0	0	0	27.0	31.2
06-22	804	0	1	16	35	195	384	157	16	0	0	0	0	0	0	0	0	26.7	31.1
06-00	821	0	1	16	35	200	391	162	16	0	0	0	0	0	0	0	0	26.7	31.1
00-00	834	0	1	16	35	204	397	164	16	1	0	0	0	0	0	0	0	26.7	31.1

Vehicles = 834

Posted speed limit = 25 mph, Exceeding = 578 (69.30%), Mean Exceeding = 28.96 mph

Maximum = 43.9 mph, Minimum = 6.4 mph, Mean = 26.7 mph

85% Speed = 31.09 mph, 50% Speed = 26.84 mph, Median = 26.84 mph

10 mph Pace = 22 - 32, Number in Pace = 648 (77.70%)

Variance = 20.30, Standard Deviation = 4.51 mph

Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
----		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		85
0000	9	0	0	0	0	5	3	0	1	0	0	0	0	0	0	0	0	26.8	-
0100	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	30.7	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	18.5	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0500	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	32.8	-
0600	4	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	27.2	-
0700	9	0	0	0	2	4	1	2	0	0	0	0	0	0	0	0	0	23.7	-
0800	25	0	1	1	2	3	13	5	0	0	0	0	0	0	0	0	0	25.7	30.7
0900	33	0	0	0	0	8	16	9	0	0	0	0	0	0	0	0	0	27.6	31.1
1000	45	0	0	0	2	9	22	12	0	0	0	0	0	0	0	0	0	27.3	31.0
1100	39	0	0	0	0	9	22	8	0	0	0	0	0	0	0	0	0	27.6	31.2
1200	65	0	0	3	4	16	32	10	0	0	0	0	0	0	0	0	0	25.9	30.3
1300	81	0	0	2	8	14	41	16	0	0	0	0	0	0	0	0	0	26.4	30.6
1400	58	0	0	0	0	8	31	17	2	0	0	0	0	0	0	0	0	28.5	31.9
1500	66	0	0	0	4	19	31	11	1	0	0	0	0	0	0	0	0	26.2	30.5
1600	77	0	0	0	4	21	38	12	2	0	0	0	0	0	0	0	0	27.0	30.9
1700	66	0	1	1	2	24	29	7	2	0	0	0	0	0	0	0	0	25.8	29.8
1800	36	0	0	0	3	10	20	3	0	0	0	0	0	0	0	0	0	25.2	28.7
1900	39	0	0	1	1	18	17	2	0	0	0	0	0	0	0	0	0	24.5	28.3
2000	25	0	0	1	3	10	5	6	0	0	0	0	0	0	0	0	0	24.8	31.2
2100	14	0	0	0	1	1	7	4	1	0	0	0	0	0	0	0	0	28.0	33.4
2200	3	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	27.8	-
2300	4	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	25.1	-
07-19	600	0	2	7	31	145	296	112	7	0	0	0	0	0	0	0	0	26.6	30.6
06-22	682	0	2	9	36	175	328	124	8	0	0	0	0	0	0	0	0	26.4	30.6
06-00	689	0	2	9	37	177	330	126	8	0	0	0	0	0	0	0	0	26.4	30.6
00-00	703	0	2	9	39	182	334	127	10	0	0	0							

**Posted speed limit** = 25 mph, **Exceeding** = 471 (67.00%), **Mean Exceeding** = 28.85 mph

**Maximum** = 39.3 mph, **Minimum** = 8.0 mph, **Mean** = 26.5 mph

**85% Speed** = 30.65 mph, **50% Speed** = 27.07 mph, **Median** = 27.07 mph

10 mph Pace = 22 - 32, Number in Pace = 551 (78.38%)

Variance = 19.17, Standard Deviation = 4.38 mph

Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
<--		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		85
0000	6	0	0	0	1	1	3	1	0	0	0	0	0	0	0	0	0	25.6	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	27.5	-
0300	4	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	29.8	-
0400	3	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	25.9	-
0500	6	0	0	1	0	1	3	1	0	0	0	0	0	0	0	0	0	25.7	-
0600	24	0	0	0	0	5	13	6	0	0	0	0	0	0	0	0	0	27.2	31.6
0700	59	0	0	2	6	24	23	3	1	0	0	0	0	0	0	0	0	24.2	28.1
0800	58	0	0	1	5	16	25	10	1	0	0	0	0	0	0	0	0	25.9	31.1
0900	65	0	0	0	2	13	37	12	1	0	0	0	0	0	0	0	0	27.3	30.7
1000	46	0	0	1	4	12	21	7	1	0	0	0	0	0	0	0	0	25.6	30.7
1100	50	0	0	2	0	17	20	10	1	0	0	0	0	0	0	0	0	26.6	31.3
1200	68	0	0	5	4	9	29	19	1	1	0	0	0	0	0	0	0	26.7	32.3
1300	64	0	0	0	0	16	31	16	1	0	0	0	0	0	0	0	0	27.5	30.8
1400	81	0	0	1	8	27	30	14	1	0	0	0	0	0	0	0	0	25.9	30.9
1500	66	0	0	4	4	16	27	13	2	0	0	0	0	0	0	0	0	26.2	31.2
1600	68	0	1	1	3	22	30	11	0	0	0	0	0	0	0	0	0	25.7	30.7
1700	82	0	0	1	3	19	43	13	3	0	0	0	0	0	0	0	0	27.2	30.7
1800	51	0	0	1	3	10	24	11	2	0	0	0	0	0	0	0	0	27.0	31.2
1900	46	0	0	0	1	9	28	6	2	0	0	0	0	0	0	0	0	27.4	30.6
2000	32	0	0	0	1	7	20	4	0	0	0	0	0	0	0	0	0	26.5	29.5
2100	18	0	0	0	1	4	12	1	0	0	0	0	0	0	0	0	0	26.0	28.6
2200	6	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	26.6	-
2300	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	25.3	-
07-19	758	0	1	19	42	201	340	139	15	1	0	0	0	0	0	0	0	26.3	30.9
06-22	878	0	1	19	45	226	413	156	17	1	0	0	0	0	0	0	0	26.4	30.9
06-00	885	0	1	19	45	227	419	156	17	1	0	0	0	0	0	0	0	26.4	30.9
00-00	906	0	1	20	46	230	431												



Variance = 20.78, Standard Deviation = 4.56 mph

Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
<--		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		85
0000	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	25.0	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	26.6	-
0300	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	28.9	-
0400	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	18.5	-
0500	8	0	0	0	1	2	1	4	0	0	0	0	0	0	0	0	0	27.6	-
0600	45	0	0	0	2	9	24	9	1	0	0	0	0	0	0	0	0	27.6	31.5
0700	99	0	0	1	4	43	38	13	0	0	0	0	0	0	0	0	0	25.4	29.4
0800	61	0	2	2	4	21	21	8	3	0	0	0	0	0	0	0	0	25.4	30.8
0900	51	0	0	1	7	16	17	9	1	0	0	0	0	0	0	0	0	25.2	31.2
1000	53	0	0	0	2	10	28	11	2	0	0	0	0	0	0	0	0	27.5	31.9
1100	39	0	0	0	2	11	18	8	0	0	0	0	0	0	0	0	0	27.0	30.4
1200	57	0	0	3	2	17	24	9	2	0	0	0	0	0	0	0	0	26.2	31.7
1300	58	0	0	4	3	23	22	6	0	0	0	0	0	0	0	0	0	24.7	29.5
1400	89	0	1	4	1	31	41	9	2	0	0	0	0	0	0	0	0	25.5	29.2
1500	68	0	0	0	8	20	37	3	0	0	0	0	0	0	0	0	0	24.8	28.1
1600	67	0	1	2	6	12	30	15	0	1	0	0	0	0	0	0	0	26.6	32.6
1700	79	0	0	0	7	16	41	13	2	0	0	0	0	0	0	0	0	26.7	31.3
1800	54	0	0	1	7	9	31	6	0	0	0	0	0	0	0	0	0	25.7	29.7
1900	44	0	0	1	6	16	16	3	2	0	0	0	0	0	0	0	0	24.9	29.6
2000	29	0	0	1	2	11	13	2	0	0	0	0	0	0	0	0	0	24.4	29.5
2100	16	0	0	0	1	7	8	0	0	0	0	0	0	0	0	0	0	24.8	28.4
2200	8	0	0	0	0	3	5	0	0	0	0	0	0	0	0	0	0	26.6	-
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
07-19	775	0	4	18	53	229	348	110	12	1	0	0	0	0	0	0	0	25.8	30.2
06-22	909	0	4	20	64	272	409	124	15	1	0	0	0	0	0	0	0	25.8	30.1
06-00	917	0	4	20	64	275	414	124	15	1	0	0	0	0	0	0	0	25.8	30.1
00-00	929	0	4	20	66	277	418	128</											

Variance = 20.99, Standard Deviation = 4.58 mph

[illegible]

2300	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	26.6	-
07-19	752	0	4	25	69	238	312	93	11	0	0	0	0	0	0	0	0	25.0	29.8
06-22	869	0	4	25	70	272	371	115	12	0	0	0	0	0	0	0	0	25.3	30.0
06-00	872	0	4	25	70	272	373	116	12	0	0	0	0	0	0	0	0	25.3	30.0
00-00	888	0	4	25	70	275	378	123	12	1	0	0	0	0	0	0	0	25.4	30.1

Vehicles = 888

Posted speed limit = 25 mph, Exceeding = 514 (57.88%), Mean Exceeding = 28.51 mph

Maximum = 42.9 mph, Minimum = 6.6 mph, Mean = 25.4 mph

85% Speed = 30.09 mph, 50% Speed = 25.72 mph, Median = 25.72 mph

10 mph Pace = 21 - 31, Number in Pace = 665 (74.89%)

Variance = 22.86, Standard Deviation = 4.78 mph

#### \* Thursday, March 31, 2022

Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
<--		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		85
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		
0000	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	36.9	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	25.6	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0400	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	32.5	-
0500	10	0	0	0	0	3	4	3	0	0	0	0	0	0	0	0	0	27.5	-
0600	38	0	0	0	0	9	20	8	1	0	0	0	0	0	0	0	0	27.7	30.5
0700	89	0	0	0	5	35	36	12	1	0	0	0	0	0	0	0	0	25.9	30.1
0800	59	0	1	1	5	11	28	12	1	0	0	0	0	0	0	0	0	26.8	31.5
0900	40	0	1	1	3	11	17	5	2	0	0	0	0	0	0	0	0	25.6	31.3
1000	29	0	0	0	0	11	13	4	1	0	0	0	0	0	0	0	0	26.6	30.6
1100	29	0	0	0	2	6	14	7	0	0	0	0	0	0	0	0	0	27.0	30.6
1200	29	0	1	0	2	6	17	3	0	0	0	0	0	0	0	0	0	25.9	30.0
1300	47	0	0	1	2	11	20	13	0	0	0	0	0	0	0	0	0	26.9	32.2
1400	73	0	0	2	5	24	31	10	0	1	0	0	0	0	0	0	0	25.9	30.0
1500	63	0	0	2	4	11	29	15	2	0	0	0	0	0	0	0	0	27.2	31.6
1600	65	0	0	2	2	8	27	25	1	0	0	0	0	0	0	0	0	28.1	32.4
1700	88	0	0	2	1	17	41	25	2	0	0	0	0	0	0	0	0	27.6	32.1
1800	67	0	0	1	4	18	26	18	0	0	0	0	0	0	0	0	0	26.7	31.7
1900	48	0	0	2	3	10	18	14	1	0	0	0	0	0	0	0	0	26.7	31.7
2000	38	0	0	0	4	5	19	10	0	0	0	0	0	0	0	0	0	26.6	31.1
2100	29	0	0	3	3	2	17	3	0	1	0	0	0	0	0	0	0	25.4	30.0
2200	14	0	0	0	1	6	7	0	0	0	0	0	0	0	0	0	0	25.3	29.7
2300	4	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	22.4	-
07-19	678	0	3	12	35	169	299	149	10	1	0	0	0	0	0	0	0	26.7	31.2
06-22	831	0	3	17	45	195	373	184	12	2	0	0	0	0	0	0	0	26.7	31.1
06-00	849	0	3	17	47	204	380	184	12	2	0	0	0	0	0	0	0	26.7	31.1
00-00	863	0	3	17	47	208	385	187	13	3	0	0	0	0	0	0	0	26.7	31.1

Vehicles = 863

Posted speed limit = 25 mph, Exceeding = 588 (68.13%), Mean Exceeding = 29.15 mph

Maximum = 43.6 mph, Minimum = 6.8 mph, Mean = 26.7 mph

85% Speed = 31.09 mph, 50% Speed = 27.07 mph, Median = 27.07 mph

10 mph Pace = 23 - 33, Number in Pace = 667 (77.29%)

Variance = 21.74, Standard Deviation = 4.66 mph

#### \* Friday, April 1, 2022

Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
<--		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		85
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		
0000	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	28.4	-
0100	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	25.6	-
0200	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	25.0	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0500	9	0	0	0	0	2	6	1	0	0	0	0	0	0	0	0	0	26.4	-
0600	50	0	0	0	3	6	27	13	1	0	0	0	0	0	0	0	0	27.7	31.4
0700	95	0	0	0	8	30	44	13	0	0	0	0	0	0	0	0	0	25.9	30.0
0800	63	0	0	0	10	12	31	7	2	0	1	0	0	0	0	0	0	26.5	30.3
0900	8	0	0	0	1	1	6	0	0	0	0	0	0	0	0	0	0	26.6	-
07-19	166	0	0	0	19	43	81	20	2	0	1	0	0	0	0	0	0	26.1	30.0
06-22	216	0	0	0	22	49	108	33	3	0	1	0	0	0	0	0	0	26.5	30.3
06-00	216	0	0	0	22	49	108	33	3	0	1	0	0	0	0	0	0	26.5	30.3
00-00	228	0	0	0	22	51	117	34	3	0	1	0	0	0	0	0	0	26.5	30.3

Vehicles = 228

Posted speed limit = 25 mph, Exceeding = 155 (67.98%), Mean Exceeding = 28.75 mph

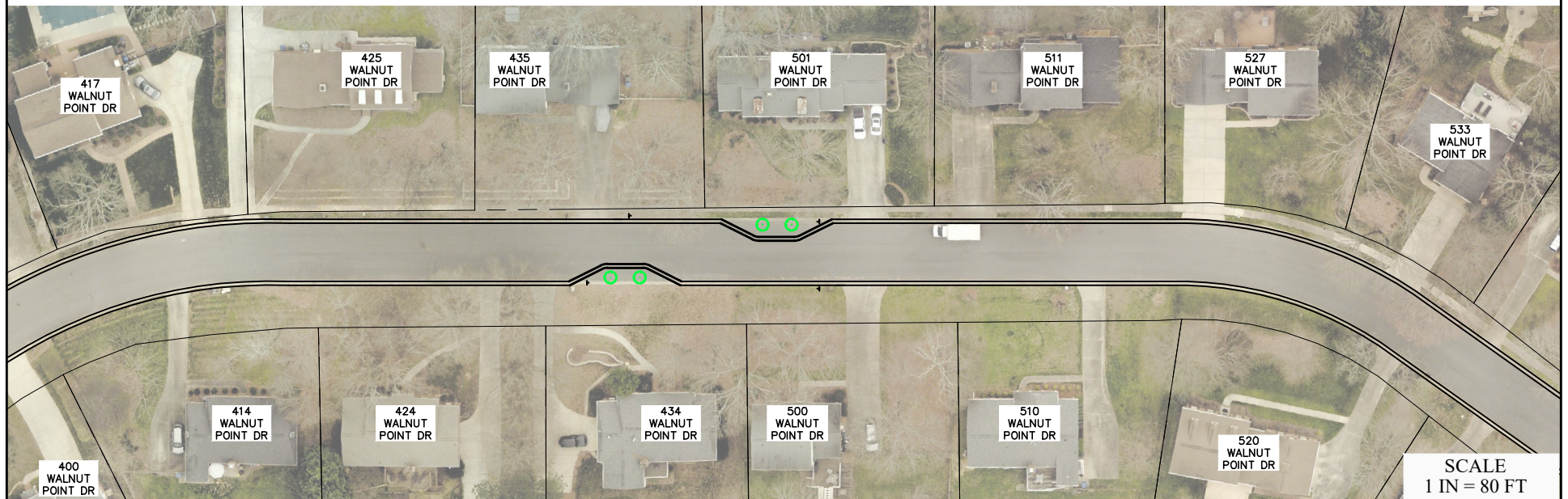
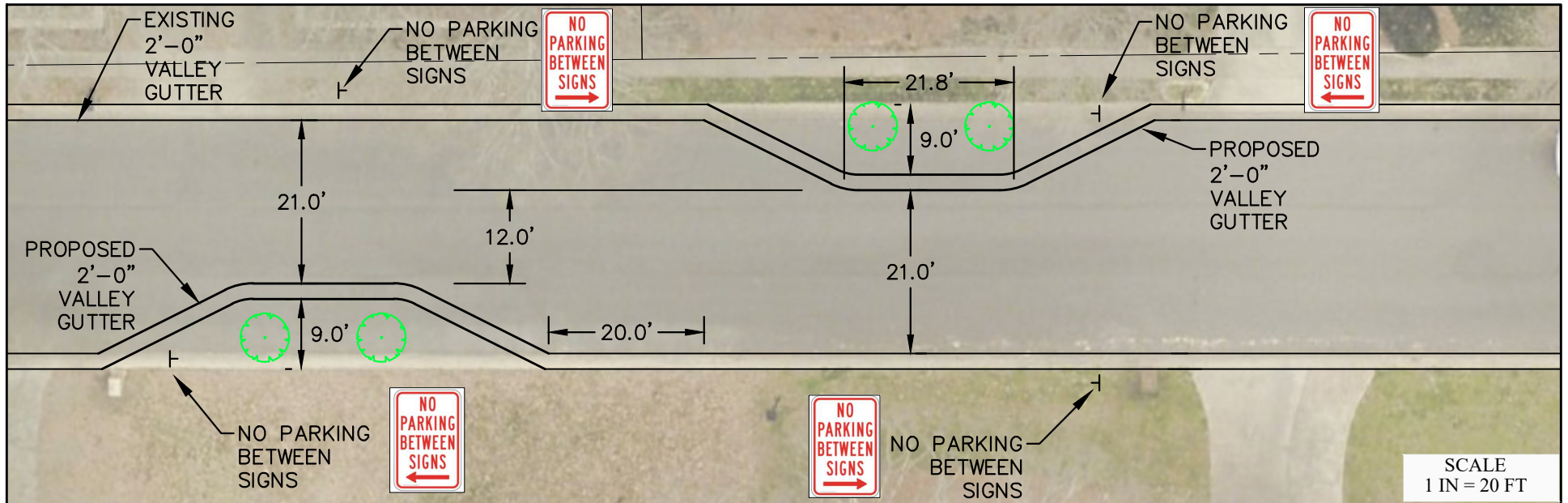
**Maximum** = 47.9 mph, **Minimum** = 15.3 mph, **Mean** = 26.5 mph  
**85% Speed** = 30.27 mph, **50% Speed** = 27.07 mph, **Median** = 27.07 mph  
**10 mph Pace** = 22 - 32, **Number in Pace** = 183 (80.26%)  
**Variance** = 18.51, **Standard Deviation** = 4.30 mph

**\* Grand Total**

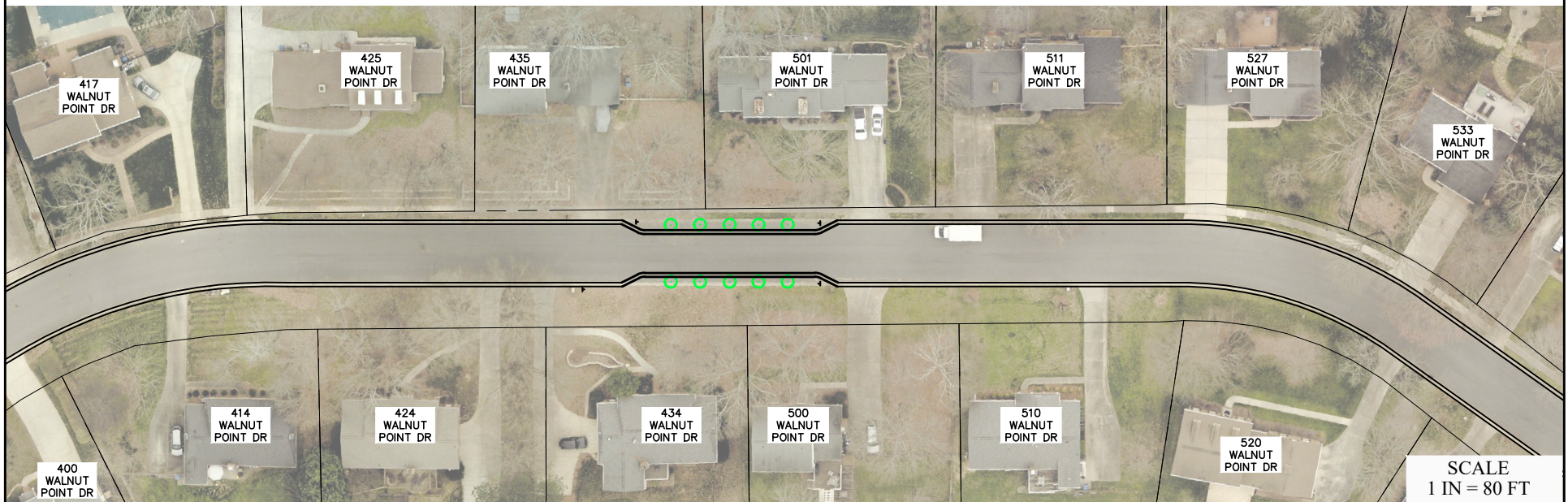
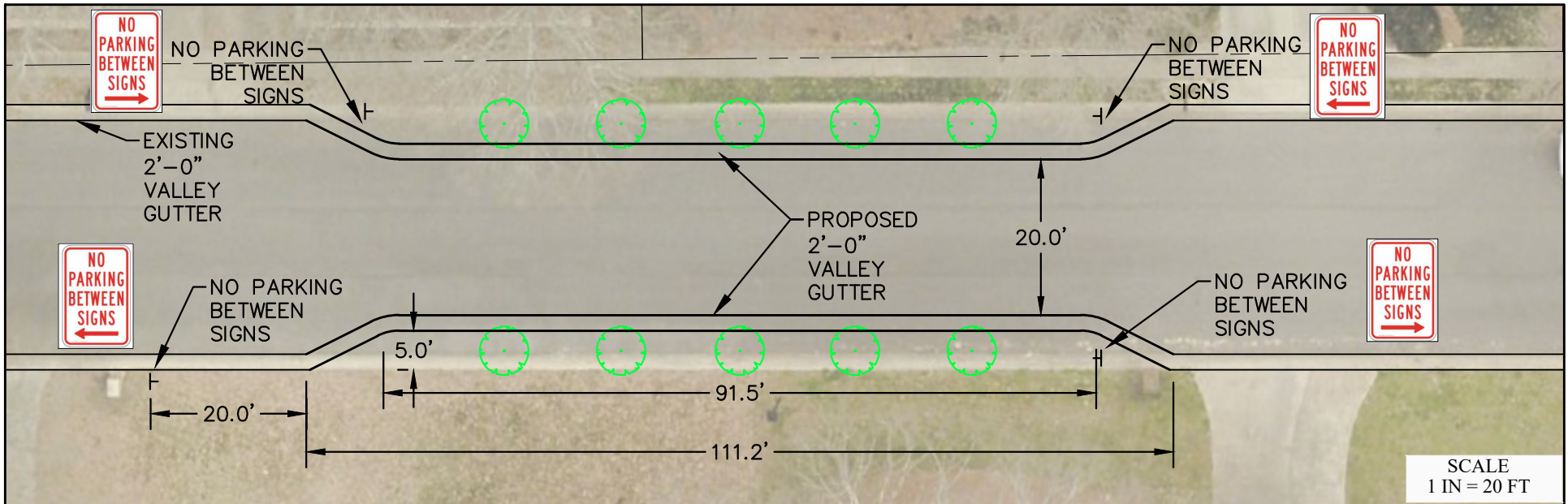
Time	Total	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp
<--		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		85
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		
--	7751	0	23	149	507	2122	3526	1290	123	10	1	0	0	0	0	0	0	26.1	30.5

**Vehicles** = 7751  
**Posted speed limit** = 25 mph, **Exceeding** = 4950 (63.86%), **Mean Exceeding** = 28.80 mph  
**Maximum** = 47.9 mph, **Minimum** = 6.4 mph, **Mean** = 26.1 mph  
**85% Speed** = 30.53 mph, **50% Speed** = 26.51 mph, **Median** = 26.51 mph  
**10 mph Pace** = 22 - 32, **Number in Pace** = 5864 (75.65%)  
**Variance** = 21.27, **Standard Deviation** = 4.61 mph

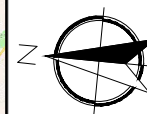
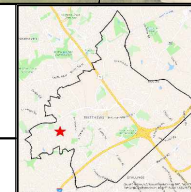
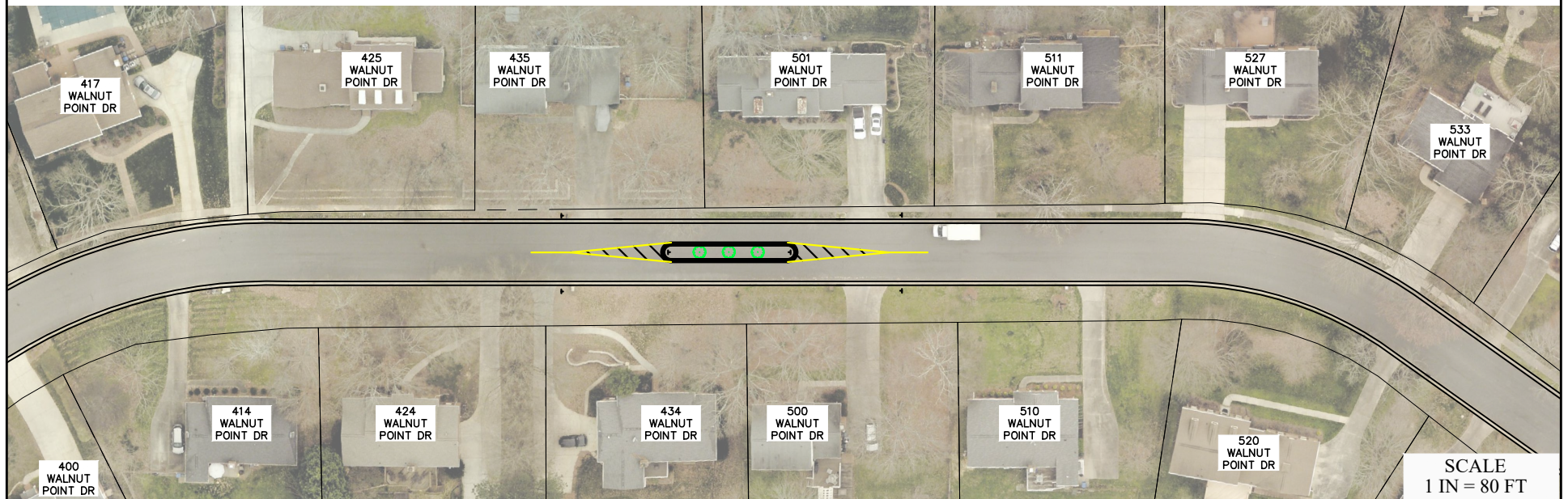
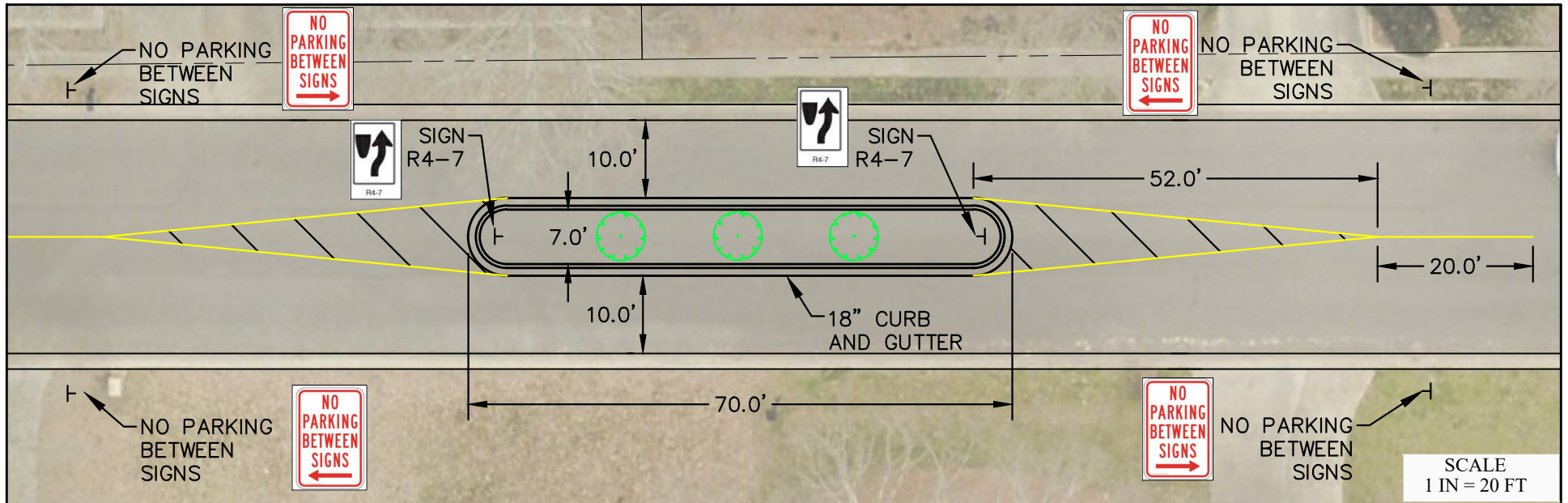
**In profile:**    Vehicles = 7751 / 7760 (99.88%)



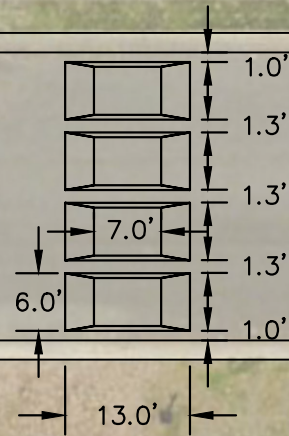




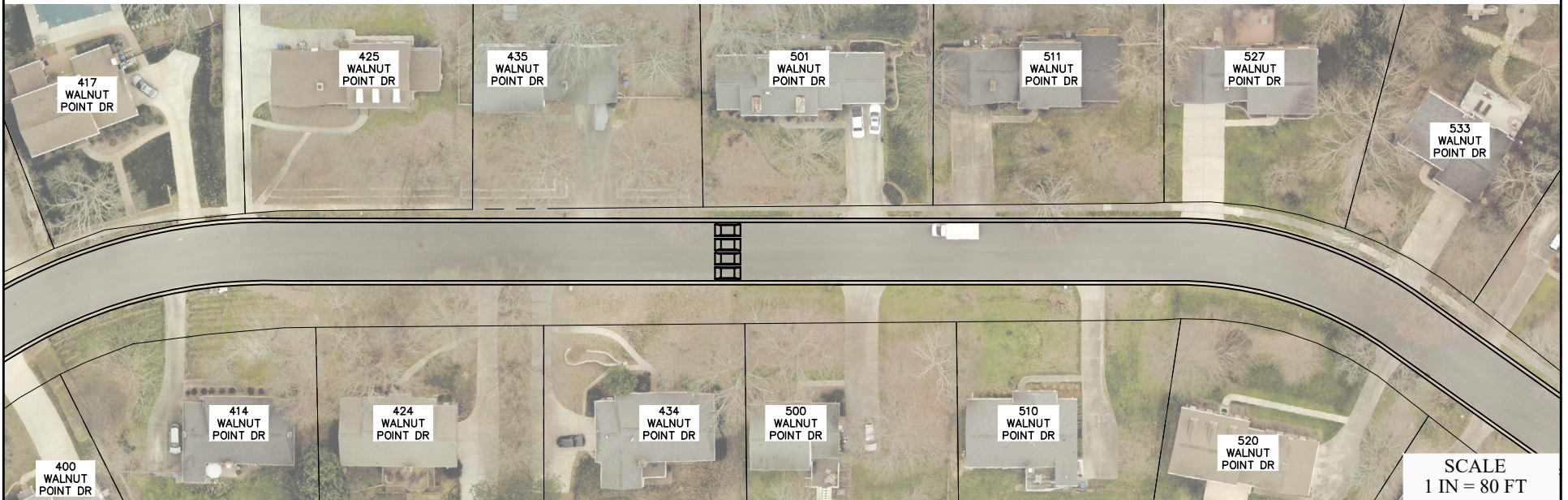




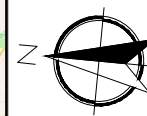
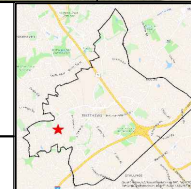




SCALE  
1 IN = 20 FT



SCALE  
1 IN = 80 FT



Summary of Traffic Calming Measures

Traffic Calming Measure	Typical Cost (2017) <sup>1</sup>	Average Daily Traffic	Functional Classification	Average Reduction in Speed	Average Reduction in Volume	Average Reduction in Crashes	Notes
Intersection Applications							
Corner Extension / Bulb-Out	\$8,000–\$12,000 (four corner extensions); drainage modifications can increase cost to \$40,000.	Can be appropriate for all levels of traffic volume.	Intersection of local, collector, and arterial roads.	Likely to decrease slightly; depends on the volume / distribution of traffic. Shorter curb radii can slow turning vehicles.	Minimal	Minimal	Shortens pedestrian crossing distances. Installed only on closed-section roads (i.e. curb and gutter). Major utility relocation may be required (i.e. drainage features). Minimum turning radii = 30 feet inside, 42 feet outside
Mini Roundabout	\$15,000–\$60,000	One-lane roundabouts: total average daily traffic volumes <25,000 vpd	Intersection of two local roads or of a local and collector road. Approach legs must be one lane in each direction.	40% <sup>3</sup> ; varies depending on deflection angles of the approach lanes.	Minimal	One-lane roundabouts: 74%	Center island and splitter islands are fully mountable: maximum height = 4 inches. Minimum inside radius = 30 feet. Minimum outside radius = 42 feet. Not typically used at intersections with high volume of left-turning trucks or buses.
Raised Intersection	\$15,000–\$60,000; may be higher depending on width of roads and drainage requirements.	Relatively low daily traffic volumes. (<4,000 vpd per intersection leg) <sup>2</sup>	Intersection of local or collector roads with existing or proposed crosswalks.	<10% reduction in mid-block speeds. 85 <sup>th</sup> percentile traversing speeds = 25–35mph.	No data available	No data available	Storm drainage / underground utility modifications are likely necessary. Typically installed at intersections with high pedestrian crossing demand. Maximum speed limit = 35 mph.
Traffic Circle	\$10,000–\$25,000	One-lane roundabouts: total average daily traffic volumes <25,000 vpd	Intersection of two local roads. Approach legs must be one lane in each direction.	5–13 mph reduction within intersection limits. Less effective than mini roundabouts due to no splitter islands.	Wide range of outcomes; varies depending on available alternative routes.	One-lane roundabouts: 74%	Center island is raised and is <b>not</b> fully mountable. Left-turning trucks or buses usually are not able to circulate around center island. Intersection approaches do <b>not</b> have splitter islands.
Segment Applications							
Chicane	\$8,000–\$25,000; varies depending on any necessary modifications to curbing and drainage.	Relatively low daily traffic volumes with an even distribution of traffic. (<3,500 vpd) <sup>2</sup>	Local road or low-volume collector. Maximum two-lane cross-section.	15%–40%; varies depending on the length of the alignment shift, the volume/distribution of traffic, and pre-implementation speed.	Minimal	Minimal	Typical dimensions of a chicane: 6-8 feet in width, at least 20 feet in length. Minimum lane width = 12 feet. Most effective with equivalent traffic volumes on both approaches. Not a preferred location for a crosswalk.
Choker	\$10,000–\$25,000; varies depending on size of choker and drainage requirements.	Can be appropriate for all levels of traffic volume.	Local, collector, and arterial roads. Maximum two-lane cross-section.	Likely to decrease slightly; depends on the volume/distribution of traffic.	Minimal	Minimal	Typical dimensions of a choker: 6-8 feet in width, at least 20 feet in length. Minimum lane width = 10 feet. Most effective when motorists traveling in opposing directions encounter one-another within the narrowed area.

<sup>1</sup>Source: ITE Traffic Calming Measures and FHWA Traffic Calming ePrimer. Includes costs for design, materials, and construction; does not include right-of-way costs.

<sup>2</sup>Note: Maximum traffic volume thresholds based on ITE and FHWA Traffic Calming resources which references Pennsylvania and South Carolina applications.

<sup>3</sup>Source: FHWA publication – *Roundabouts: An Informational Guide*.



Summary of Traffic Calming Measures (continued)

Traffic Calming Measure	Typical Cost (2017) <sup>1</sup>	Average Daily Traffic	Functional Classification	Average Reduction in Speed	Average Reduction in Volume	Average Reduction in Crashes	Notes
Segment Applications							
Median Island	\$15,000–\$55,000; varies depending on length and width of median.	Can be appropriate for all levels of traffic volume.	Local, collector, and arterial roads. Two-way roads only.	2–3mph reduction at/near the median island.	Minimal	Minimal	Minimum lane width = 12 feet. Can be used as a pedestrian refuge island. May impact access to properties adjacent to median island. May require relocation of drainage features and utilities. May require removal of on-street parking.
On-Street Parking	<\$6,000; could be higher depending on design specifications and length of application.	Can be appropriate for all levels of traffic volume.	Local, collector, and arterial roads as a midblock measure or near an intersection.	2–3mph reduction at/near on-street parking areas.	Minimal	Minimal	Minimum roadway width between parked vehicles = 15 feet. Effectiveness is directly affected by parking demand. May limit visibility and sight distance at driveways or intersections.
Speed Cushion	Rubber: \$3,000–\$4,000 Asphalt: \$2,500–\$6,000	Relatively low daily traffic volumes (<3,500–4,000 vpd <sup>2</sup> )	Local and collector roads.	20%–25%; varies depending on height and spacing of speed cushions.	20%	13%	Speed reduction for emergency vehicles with a wider wheelbase is minimal. Not appropriate on grades greater than 8%.
Speed Hump	\$2,000–\$4,000		Local road or residential collector.	20%–25%; varies depending on height and spacing of speed humps.	20%	13%	Not appropriate for a primary emergency vehicle route or bus transit route. Not appropriate on grades greater than 8%.
Speed Table	\$2,500–\$8,000		Local, collector, and arterial roads (in certain circumstances).	Speed reduction typically less when compared to speed humps. Typical traversing speed = 30mph.	20%	45%	

<sup>1</sup>Source: ITE Traffic Calming Measures and FHWA Traffic Calming ePrimer. Includes costs for design, materials, and construction; does not include right-of-way costs.

<sup>2</sup>Note: Maximum traffic volume thresholds based on ITE and FHWA Traffic Calming resources which references Pennsylvania and South Carolina applications.

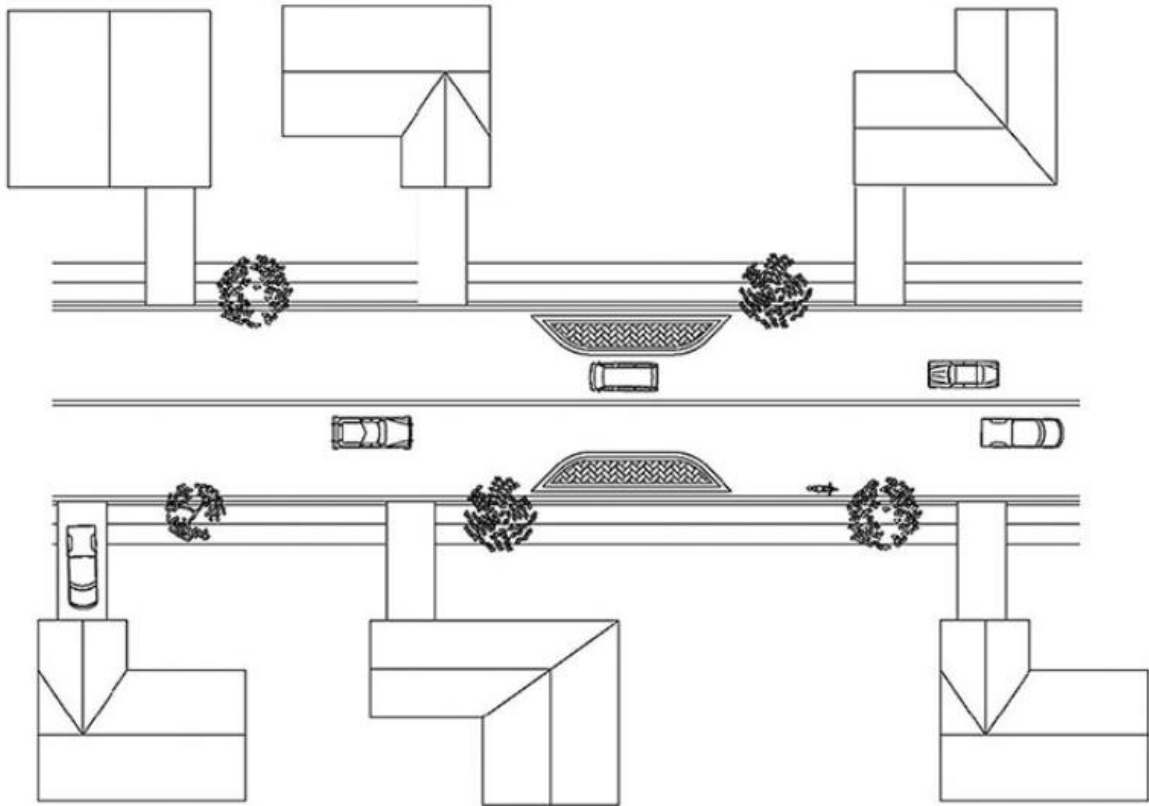
<sup>3</sup>Source: FHWA publication – *Roundabouts: An Informational Guide*.

## Chicane

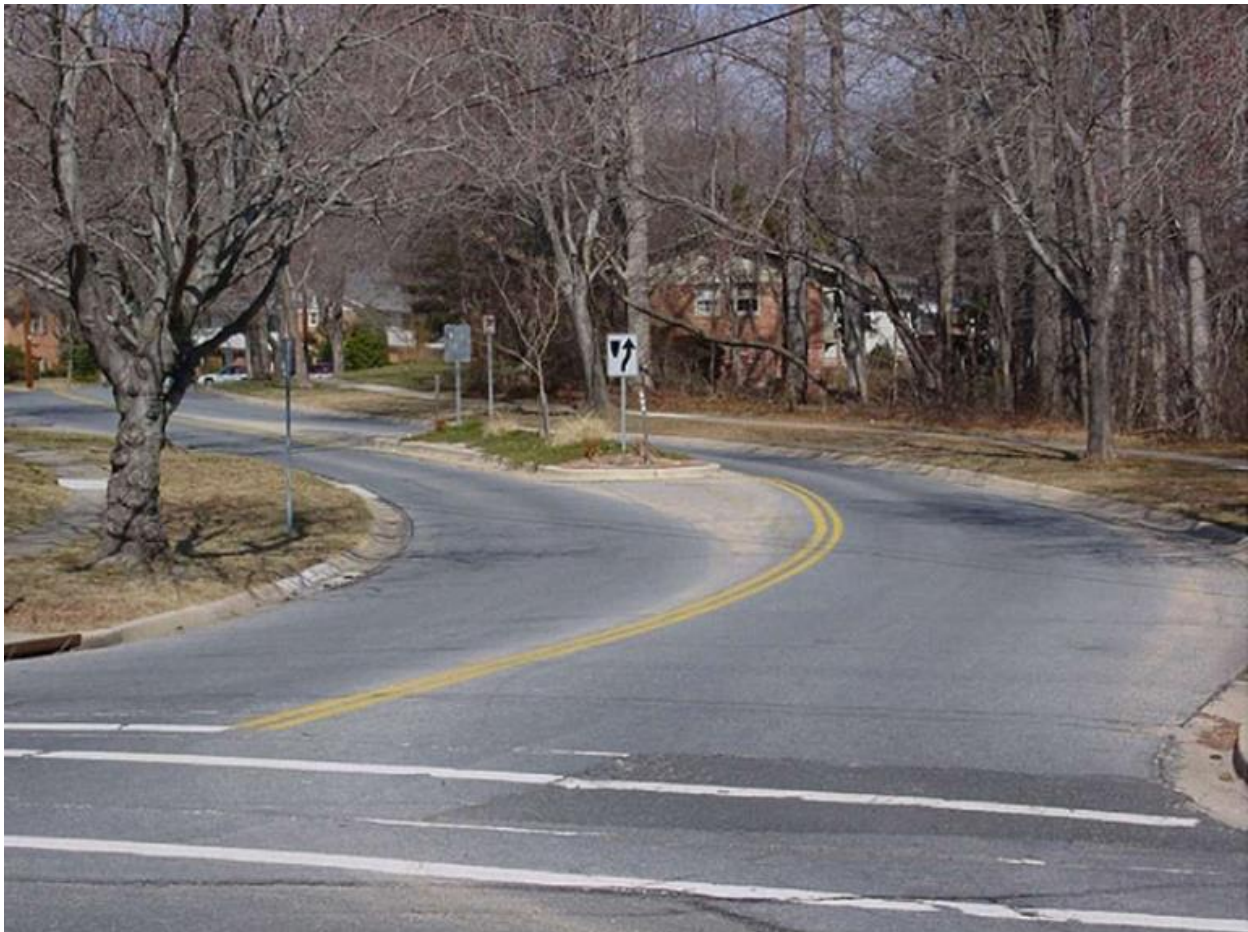
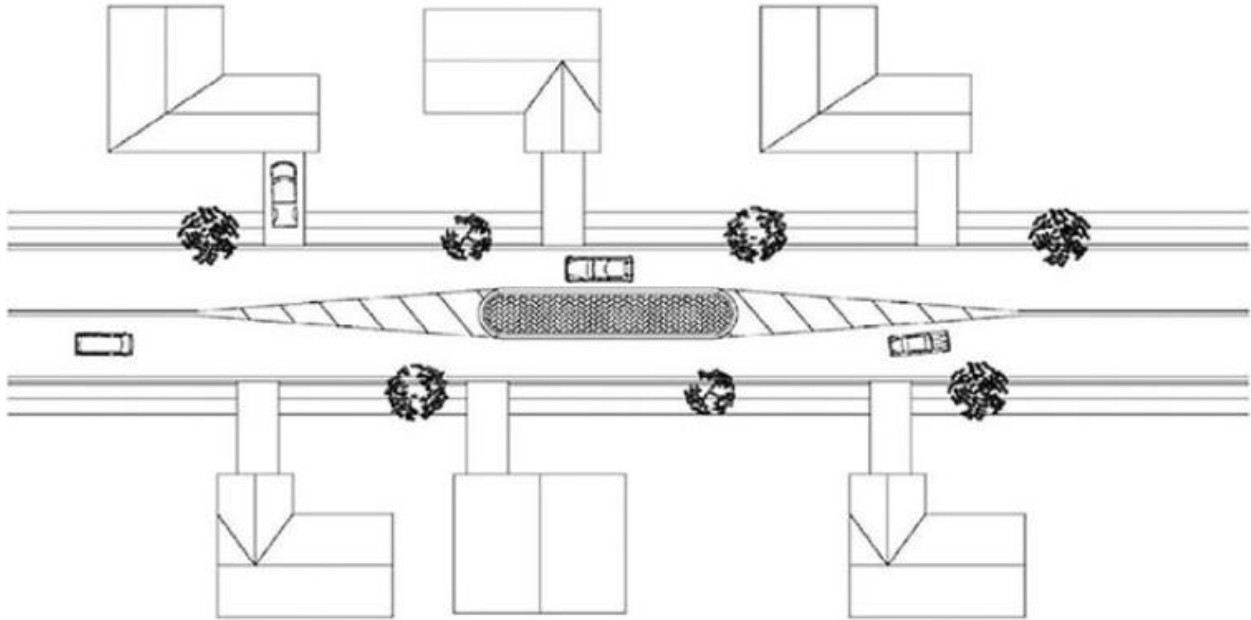




## Choker



## Median Island



## Speed Cushion

